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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,187	02/27/2004	Hooman Honary	80107.118US1	6949

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LeMoine Patent Services, PLLC  
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P.O. Box 52050  
Minneapolis, MN 55402

EXAMINER
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DIMYAN, MAGID Y

ART UNIT	PAPER NUMBER
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2825

MAIL DATE	DELIVERY MODE
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04/15/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/789,187	<b>Applicant(s)</b> HONARY ET AL.	
	<b>Examiner</b> MAGID Y. DIMYAN	<b>Art Unit</b> 2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9 and 11-20 is/are rejected.
- 7) ☐ Claim(s) 8 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/17/2008</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

1. This is regarding the Amendments to the Claims, and Remarks, filed 01/17/2008. It is acknowledged that Applicants have amended claims 1 – 3, 5 – 7, 11, 12 and 14 – 20, and have cancelled claims 21 – 30. Claims 1 – 20 remain pending in this Application.

### ***Response to Arguments***

2. Applicant's arguments, see Remarks, filed 01/17/2008 with respect to the rejections of claims 1 - 20 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, new grounds of rejections are made in view of Publication No. US 2004/0258069 A1, as outlined below.

### ***Claim Objections***

3. **Claims 1, 7, 11 and 15** are objected to because of the following issues:
- In claim 1 line 5, claim 7 line 4 and claim 11 line 6, delete "allocable" and insert --allocatable--.
  - In claim 7 line 3, insert --in a heterogeneous reconfigurable device-- after "elements".
  - In claim 15 line 2, insert --in a heterogeneous reconfigurable device-- after "elements".
4. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1 – 7, 9 and 11 - 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Publication No. US 2004/0258069 A1 to Serbest et al. (hereinafter, "Serbest").**

7. **Pursuant to claims 1 and 11**, Serbest discloses a method (claim 1 - see Fig. 4; paragraph 0093), and an apparatus (system) including a medium to hold machine – accessible instructions when accessed result in a machine performing the method (claim 11 – see Fig. 3; paragraph 0101), comprising:

(a) configuring a plurality of heterogeneous processing elements in a heterogeneous reconfigurable device (these configurable heterogeneous processing elements are called “PE” and “CE” by Serbest - see Figs. 2 and 3; paragraphs 0011 and 0101), the plurality of heterogeneous processing elements being coupled to a plurality of routers (see Fig. 3; paragraph 0012), the plurality of routers being interconnected by a plurality of mesh interconnect networks (see paragraphs 0017 – 0019), the plurality of mesh interconnect networks being

allocatable to either data, or control, or a combination thereof (see again Figs. 3 and 4; paragraphs 0088, 0097 and 0098); and

(b) allocating the plurality of mesh interconnect network for data and control in the heterogeneous reconfigurable device (see again Figs. 3; paragraphs 0088 and 0097).

Thus, Serbest **clearly anticipates** all the claimed limitations.

8. **As per claim 2**, see paragraphs 0077 - 0080, which teach using a protocol (EoMPLS) to configure the heterogeneous processing elements (PE and CE0, as claimed.

9. **As per claims 3 – 6**, see again Fig. 3 and 4; paragraphs 0019, 0068 - 0071 and 0077 – 0080, which teach the claimed elements pertaining to allocation of a first and second plane to data, control and/or data and control.

10. **Regarding claim 7**, Serbest teaches a method comprising:

(a) translating a design description into a configuration for a plurality of heterogeneous processing elements in a heterogeneous reconfigurable device (see Figs. 2 and 3; paragraphs 0011 and 0101) coupled to routers (see paragraph 0012) interconnected by a plurality of mesh interconnect networks (see paragraphs 0017 – 0019), being allocatable to either data or control or a combination thereof (see Figs. 3 and 4; paragraphs 0088, 0097 and 0098); and

(b) allocating the plurality of mesh interconnect network for data and control in the heterogeneous reconfigurable device (see again Figs. 3; paragraphs 0088 and 0097).

Serbest **clearly discloses** all the claimed elements.

11. **As per claim 9**, see paragraphs 0077 – 0080, which teach the elements pertaining to the protocol file, as claimed.
12. **Claims 12, 13 and 14** contain the same limitations found in **claims 3, 4 and 5**, respectively, and therefore the same rejections also apply.
13. **Referring to claim 15**, Serbest discloses an apparatus (system) comprising:
  - (a) a heterogeneous network of processing elements in a heterogeneous reconfigurable device (see Figs. 2 and 3; paragraphs 0011 and 0101); and
  - (b) first and second mesh interconnect networks coupled to the heterogeneous network of processing elements (see paragraphs 0017 - 0019), wherein the apparatus is programmable to utilize first and second mesh interconnect networks for any combination of data and control (see paragraphs 0088, 0089 and 0101).
14. **As per claims 16 – 20**, see again Fig. 3 and 4; paragraphs 0019, 0068 - 0071 and 0077 – 0080, which teach the claimed elements pertaining to allocation of a first and second mesh interconnect networks to data, control and/or data and control (claims 16, 18, 19 and 20), and see paragraph 0096 which teaches the element of using packets of information (claim 17).
15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Allowable Subject Matter***

16. **Claims 8 and 10** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

17. The following is a statement of reasons for the indication of allowable subject matter: prior art does not teach the additional claimed limitations pertaining to latency constraints, or generating a second protocol file when performing a second allocation.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAGID Y. DIMYAN whose telephone number is (571)272-1889. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on (571) 272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Magid Y Dimyan  
Examiner  
Art Unit 2825

myd  
02 April 2008

/MYD/

/Vuthe Siek/  
Primary Examiner, Art Unit 2825